exterior of the windows, your closures would be much preferable, even in appearance, to a brick which has been cut with a trowel, with the surface, of course, defaced.

Closure bricks might be adopted as a cheap and useful drain by a common brick flat, with two closures laid on the same, two inches asunder, or four inches and reversed.

Your closures would be useful in all kind of ornamental brick work.

Two inches is a very desirable brick, but most times avoided, in consequence of the waste in cutting common bricks, and difficulty in producing a smooth face, which would be completely obviated by the introduction of closure bricks.

Yours, &c.

RICH. BILLING.

Reading, Dec. 3d, 1810.

Mode of conveying Steam from Boilers ; by Mr. George Webster. (From the Transactions of the Society for the Encouragement of Arts, Manufactures, and Commerce.)

It is with pleasure that I communicate to you the contents of this paper, hoping that this invention will be beneficial to the public; the leading feature of the contrivance is simplicity, and that may possibly be a fair recommendation, at least such it seems to me.

I have just finished a new erection, for my better accommodation in the whitening and stoving of woollen cloths, and having been long annoyed in this business with the steam from the hot water in the pans, I determined, if possible, to get quit of it; besides I had ample proof in my old building, how injurious the steam was to the timbers of the floors, &c. Permit me to say, that I spent a decent sum of money to no purpose, and was giving up the idea, in despair of its accomplishment, when I hit upon this expedient, which answers my most sanguine desires.

I presume that this easy method of carrying away the steam has never yet been in practice, and if once known will be of very considerable utility. In the numerous instances in trades where steam is inconvenient, it offers a ready riddance; to the timber in buildings, and to the furniture in houses, private kitchens, &c. it affords a desired security; but in many trades, as glue-makers, tallow-chandlers, &c., where the effluvia, united with or without water, is offensive and obnoxious, it must be doubly and trebly valuable; and these cases are more numerous than I can recite or am acquainted with. The evaporating matter needs no longer to be the plague of the workmen, or the nuisance of the neighbourhood.

I hope that the plan, though simple, and that the object, though not of the first magnitude, will be deemed worthy of the approbation of the Society.

In the model I have sent to the Society, the steam chimney is carried up as high as the smoke chimney, which is the case at my works, being my first essay; but this is not immediately necessary, for in the bleach-house belonging to Messrs. Benyon, Benyon, and Baze, flax-spinners, of this place, I advised the steam to enter the smoke-flue, about six feet above the top of the pan, and with the same good effect.

Several of my friends here have adopted them in their kitchens, and wash and brew-houses. The steam-flues are variously curved, as the situations required them to reach the nearest or most convenient smoke chimney, and with the same uniformly good success. I would, however, recommend, that at the lower

part of the aperture, where the steam enters a smoke-flue, a stone may be made to project a little way into the chimney, in order to break the current of the ascending smoke, and thereby facilitate the entrance of the steam.

I would remark further, that in some cases a curved or angular form may possibly be found the most eligible for the steam chimney, in order to prevent a gust of wind, or any other casualty, from forcing soot down into the liquid in the pan. I have not yet witnessed any immediate necessity for it myself, and therefore merely suggest it as possible, but yet very easily remedied.

On the Utility of Oxygen Air in promoting Vegetation; by Daniel Hill, Esq. F.H.S. (From the Transactions of the Horticultural Society of London.

The two sketches of a Pelargonium Zonale, which I have now the honour of exhibiting to the Horticultural Society, are fac-similes of the plant itself, and will give some idea of the utility of oxygen air, when imparted to the soil around the roots of plants. This plant, in June 1796, was eighteen inches high, with few flowers upon it. As the window of my house, in Great Russel-street, where the plant was kept, faces several large breweries, this, like many others, during eight successive years, soon drooped, and shewed the badness of the air for vegetation, so that by the middle of July, having been drawn weak, and most of its leaves decayed, it was condemned for removal.

Being strongly persuaded that oxygen air gave vigour to plants, I determined to try the effect of applying it to the soil of this plant. In the short space of a week, I was gratified with seeing an evident change for the better, all the branches beginning to grow; and, from a sickly yellow, its leaves soon resumed their natural green colour. Three strong shoots from the bottom in six weeks grew up to the top of the old plant, and by the middle of September it was in the greatest possible health, loaded with flowers, and the largest leaves I had ever seen. The height of the plant, under this treatment, was

in September, 1796, two feet nine inches,
in September, 1797, five feet ten inches,

sending out proportionably vigorous lateral branches.

Thus, it appears, that by the use of oxygen air this plant, in an unfavourable situation, grew stronger and more healthy than it probably would have done in the most favourable situation without oxygen air; for the earth in which it grew only weighed between five and six pounds; the pot stood in an east window of a room, in which a fire was only kept about six hours out of the twenty-four each day, so that the frost often penetrated to it; and that of Christmas, 1796, was so keen as to sink a thermometer, hung behind the plant, several degrees below the freezing point. By a temporary removal, however, into a warmer room, though the plant was greatly injured, it was so far restored to health as to be full of leaves and flowers by March, 1797. This healthy state was again checked by a severe frost penetrating into the room, my servant having incautiously left the window open: its flowers were quite blasted, and most of its leaves. From this accident, however, it soon recovered, and is at this moment more than twelve feet high, in the fullest health and beauty.

I have been making experiments for several winters, on the roots of hyacinths, placed in the glasses of New River water, by immersing an